

Claims

1. Device for transporting toner to/from a toner deposition unit in an electrophotographic printing or copying device,  
in which for the transport of the toner a rotatable cylinder (17) having a cylinder sheath (22) is provided that is constructed in such a way that the adhesive forces to the toner are small.
2. Device as recited in Claim 1,  
in which the cylinder sheath (22) of the cylinder (17) is electrically conductive and comprises in its interior a magnet system (18).
3. Device as recited in Claim 1 or 2,  
in which the cylinder sheath (22) comprises a metallic layer having a surface (26) that has a high degree of roughness, such that peaks or columns (27) arise.
4. Device as recited in Claim 3,  
in which the recesses of the surface are filled with a plastic (25).
5. Device as recited in Claim 1,  
in which the cylinder sheath (22) comprises a metallic layer that is coated with an electrically conductive plastic.
6. Device as recited in Claim 5,  
in which the coating (23) is made of a plastic that is doped with an electrically conductive material.
7. Device as recited in Claim 6,  
in which the plastic is doped with carbon.
8. Device as recited in Claim 1,

in which the layer (24) is built up from porous ceramic material having a roughness of 2-80  $\mu\text{m}$ .

9. Device as recited in Claim 1,  
in which the layer (24) is built up from composite material.

10. Device as recited in Claim 9,  
in which the layer (24) is built up from a porous thermal ceramic sprayed layer (28) whose pores (29) are at least partially filled with plastic.

11. Device as recited in Claim 10,  
in which the pores have a diameter of 2-100  $\mu\text{m}$ .

12. Device as recited in one of Claims 4 to 11,  
in which the plastic is made of PFA.

13. Device as recited in one of Claims 4 to 11,  
in which the plastic is PTFE or a PTFE derivate.

14. Device as recited in one of Claims 4 to 13,  
in which the layer comprises a volume resistance in the range up to  $10^9 \Omega\text{cm}$ .

15. Application of the device as recited in one of the preceding claims, as a magnetic cylinder for transporting developer to a toner deposition unit in the developer station of an electrophotographic printing or copying device.

16. Application of the device as recited in one of Claims 1 to 14 as a cleaning cylinder for a toner deposition unit.

17. Developer station using a device as recited in one of Claims 1 to 14 in an electrophotographic printing or copying device,

- in which the transfer cylinder (32) transports a developer comprising toner and carrier to an applicator cylinder (31),
- in which the applicator cylinder (31) takes over the toner from the developer and transports it past an intermediate carrier,
- in which, adjacent to the applicator cylinder (31), there is situated a cleaning cylinder device (34) that cleans residual toner and developer from the applicator cylinder (31).

**[Translator's note: in Figure 6, the caption ERSATZBLATT (REGEL 26) means  
SUBSTITUTE PAGE (RULE 26).]**